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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,310	12/15/2000	Dong Yeung Kwak	2658-0249P	8725

2292 7590 07/14/2003

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EXAMINER

ISAAC, STANETTA D

ART UNIT	PAPER NUMBER
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2812

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,310

Applicant(s)

KWAK ET AL.

Examiner

Stanetta D. Isaac

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 12-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36-45 is/are allowed.
- 6) ☒ Claim(s) 7, 8, 10, 11 and 28-35 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election is acknowledged however, this is not found persuasive because on page 2 of the restriction requirement mailed on 04/29/03, claims 7-11 were included in the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. ~~Claims 7-11 and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over~~

Kim et al. US Patent 6,512,243.

4. Kim discloses a semiconductor method substantially as claimed. See **Figs. 1-6** where Kim teaches a method of fabricating a liquid crystal display device wherein the device includes gate electrode lines, electrode links and electrode pads within a picture display part of a liquid crystal display panel, a gate insulating film of is an inorganic material on a substrate provided with the gate electrode lines, links and pads, forming data electrode lines, electrode links and electrode pads on the gate insulating film, an organic protective film on the gate insulating film provided with the data electrode lines, links and pads, and a seal crossing the gate and data electrode links on the organic protective film, said method comprising:

removing the protective film **133** and partially removing the gate insulating film **131** to a predetermined thickness to define holes **150** between the gate electrode links and the data electrode links.

However, Kim fails the steps of contacting the seal with the gate insulating film through the holes and forming a seal over said gate insulating film to make contact with said adherence surface. See **Fig. 6** where Kim teaches contacting the seal with the gate insulating film through the holes and forming a seal over said gate insulating film to make contact with said adherence surface. In view of Kim it would have been obvious to one of ordinary skill in the art to incorporate this step because the short-disconnecting channel may be optionally be filled with an insulating material in which the short-disconnecting channel **150** is formed running along between the adjacent pads **111** and between the adjacent link lines **112**. (See **col. 4 lines 64-67** and **col. 5 lines 1-3**)

5. Pertaining to claim 8, Kim teaches the method as claimed in claim 7, wherein the protective film and the gate insulating film are continuously removed by the dry etching technique.
6. Pertaining to claim 10, Kim teaches the method as claimed in claim 7, wherein the holes are extended into the outside of an area occupied by the seal.
7. Pertaining to claim 11, Kim teaches the method as claimed in claim 9, wherein the terminating the etching process step comprises:
 - monitoring reactive gas generation; and
 - terminating when the reactive gas is no longer being generated.

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8. Pertaining to claim 28, Kim teaches a method to form a lower plate of a liquid crystal device, the method comprising:
- a forming a glass plate **100**;
 - forming a gate insulating film **131** over said lower glass plate such that at least a portion of said gate insulating film defines an adherence surface;
 - forming a protective film **133** over said gate insulating film such that at least a portion of said adherence surface is exposed.
9. Pertaining to claim 29, Kim teaches the method of claim 28, wherein said adherence surface is defined on said glass plate by forming at least one hole in said gate insulating film to expose at least a portion of a surface of said glass plate.
10. Pertaining to claim 30, Kim teaches the method of claim 28, further comprising: forming a plurality of gate links between said lower glass plate and said gate insulation film.
11. Pertaining to claim 31, Kim teaches the method of claim 30, wherein said adherence surface is disposed between at least two adjacent gate links.
12. Pertaining to claim 32, Kim teaches the method of claim 28, further comprising: forming a plurality of data links between said gate insulation film and said protective film.
13. Pertaining to claim 33, Kim teaches the method of claim 32, wherein said adherence surface is disposed between at least two adjacent data links.
14. Pertaining to claim 34, Kim teaches the method of claim 28, wherein said adherence surface extends beyond an edge of said seal.
15. Pertaining to claim 35, Kim teaches the method of claim 28, wherein said adherence surface is inorganic.

Allowable Subject Matter

16. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. Claims 36-45 are allowed.

18. The following is an examiner's statement of reasons for allowance: Applicant's independent claim 36 are allowed of the references of record because none teach or render obvious a method to control a thickness of a gate insulation film remaining after etching, the method comprising, forming an etch point detection window such that a dummy pattern of a predetermined thickness is formed below the gate insulation film.

All dependent claims are also render allowable.

19. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

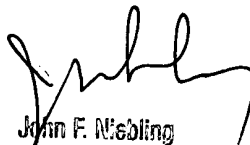
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stanetta D. Isaac whose telephone number is 703-308-5871. The examiner can normally be reached on Monday-Friday 7:30am -5:30pm.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Nebling can be reached on 703-308-3325. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-3432 for After Final communications.

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22. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Stanetta Isaac
Patent Examiner
June 27, 2003


John F. Nebling
Supervisory Patent Examiner
Technology Center 2800